CPP 程式設計題

命題者：FGX

題目名稱(中文/英文)：Simple Interactive Fiction

主要測試觀念：String Operations

Basics	Functions
■ C++ BASICS	□ SEPARATE COMPILATION AND NAMESPACES
■ FLOW OF CONTROL	□ STREAMS AND FILE I/O
□ FUNCTION BASICS	□ RECURSION
□ PARAMETERS AND OVERLOADING	□ INHERITANCE
□ ARRAYS	□ POLYMORPHISM AND VIRTUAL FUNCTIONS
□ STRUCTURES AND CLASSES	□ TEMPLATES
□ CONSTRUCTORS AND OTHER TOOLS	□ LINKED DATA STRUCTURES
□ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES	□ EXCEPTION HANDLING
■ STRINGS	□ STANDARD TEMPLATE LIBRARY
□ POINTERS AND DYNAMIC ARRAYS	□ PATTERNS AND UML

題目說明：

Read data file "script.txt" and interact with user (fixed standard input).

"Interact" means to repeat program's output and user's input alternately.

Take a look at "script.txt", which consists of scene sections (at least 1).

A scene section must contain 3 kinds of statements in order:

1. Scene code: 1 line with start symbol '#' followed by a unique string (ID) without space.

2. Narration: At least 1 line without start symbol.

3. Options: Any number of line with start symbol '-' followed by its content, and then a space and a scene code implicating which scene to go to after this selection. A scene without any option is an end scene.

There is a blank line after each scene section.

輸入說明：

When any option appears, input the respective number to select one of them.

輸出說明：

Start from the first scene "#0".

1. Print all narration.

2. Print the content of each options after a number sequence "(x) ", where x = 1, 2, … for each scene section.

3. After get the input, jump into the next scene, and redo the previous two steps.

Program stops after printing the narration of an end scene.

IO 範例：

Sample Input	Sample Output
1	When I open my eyes, all around is wholly black.
1	It seems that I'm in a maze.
2	I must find the exit.
1	(1) Front
1	(2) Back
2	There's a boy sleeping on the ground.
	(1) Wake him up
	(2) Ignore him
	There's a girl sleeping on the ground.
	(1) Wake her up
	(2) Ignore her
	There's an intersection.
	Boy: I'm Whity. The exit is on the right.
	(1) Right
	(2) Left
	(3) Front
	Thinking for a while, I still can't trust Whity.
	(1) Right
	(2) Left
	(3) Front
	Thinking for a while, I still can't trust Whity.
	(1) Right
	(2) Left
	(3) Front
	Whity disappeared on the next day.
	Unable to find the path to exit, I'll be prisoned in the maze forever.

附屬資料：

☑解答程式：SIF.cpp

☑測試資料：script.txt, input.txt, output.txt, script2.txt, input2.txt, output2.txt

■易，僅需用到基礎程式設計語法與結構

□中，需用到多項程式設計語法與結構

□難，需用到多項程式結構或較為複雜之資料型態或結構

解題時間：20 分鐘

其他註記：

No error check is needed.

Add "system("pause")" before the program stops.

Some code for file I/O is provided.